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**Richardson**

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(54) **BUNDLING DEVICE**

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**A44B 18/00** (2006.01)

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24/442

(58) **Field of Classification Search** ..... 24/16 R,  
24/16 PB, 17 R-17 AP, 306, 442; 40/316  
See application file for complete search history.

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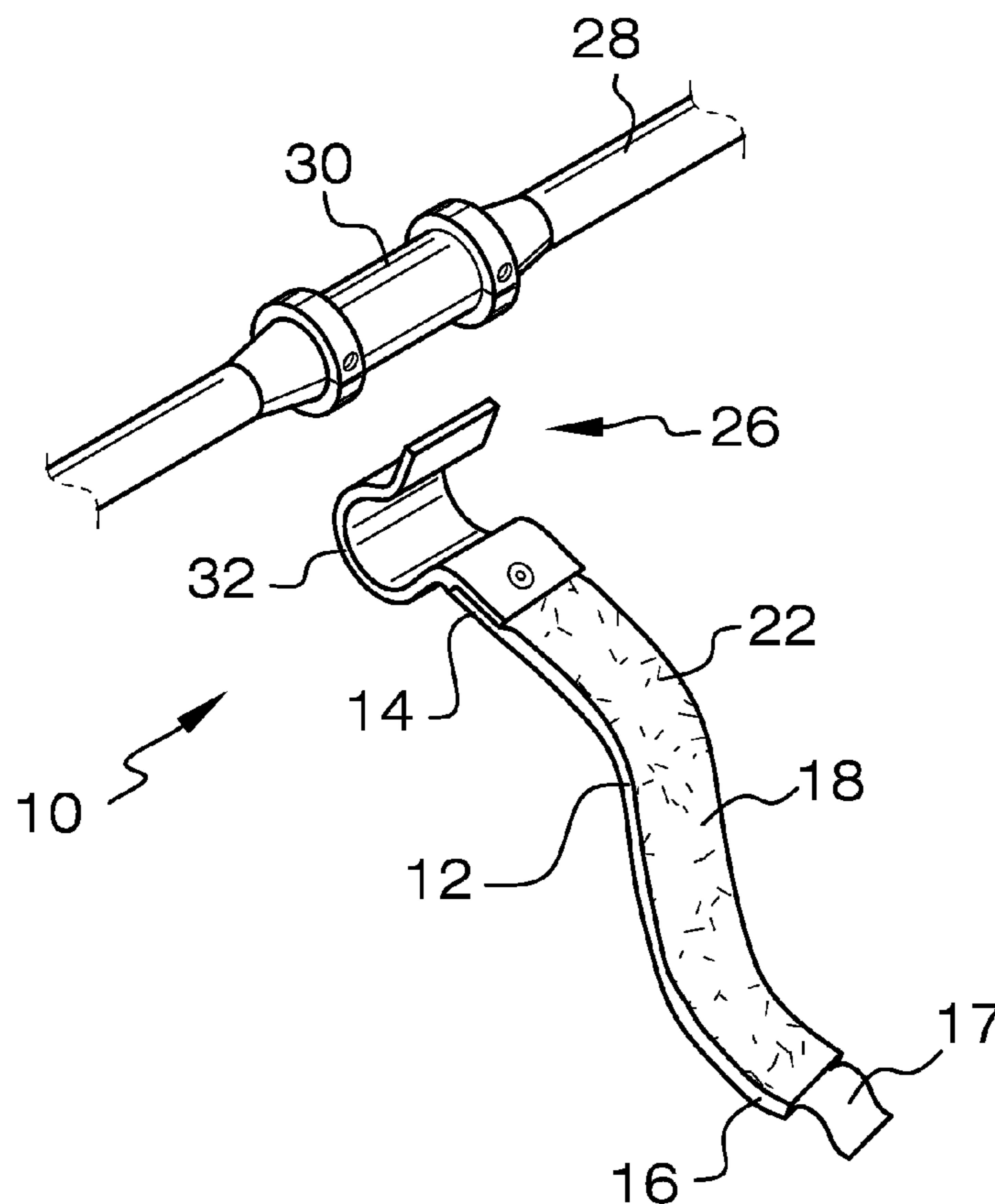
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(57) **ABSTRACT**

A reusable bundling device for wrapping and securing bundles of cable, rope, hose, electrical cords and other elongated members. The bundling device includes a flexible strap having one surface covered with hook members and an opposed second surface covered with a plurality of loop members. The hook members are releasably engagable with the loop members to encircle and retain the bundle. The first end of the flexible strap is removably attachable to a portion of the cord. Further, the bundling device is color coded to facilitate the identification of useful information pertaining to the cord and to rematch the strap once removed from the cord.

**9 Claims, 3 Drawing Sheets**



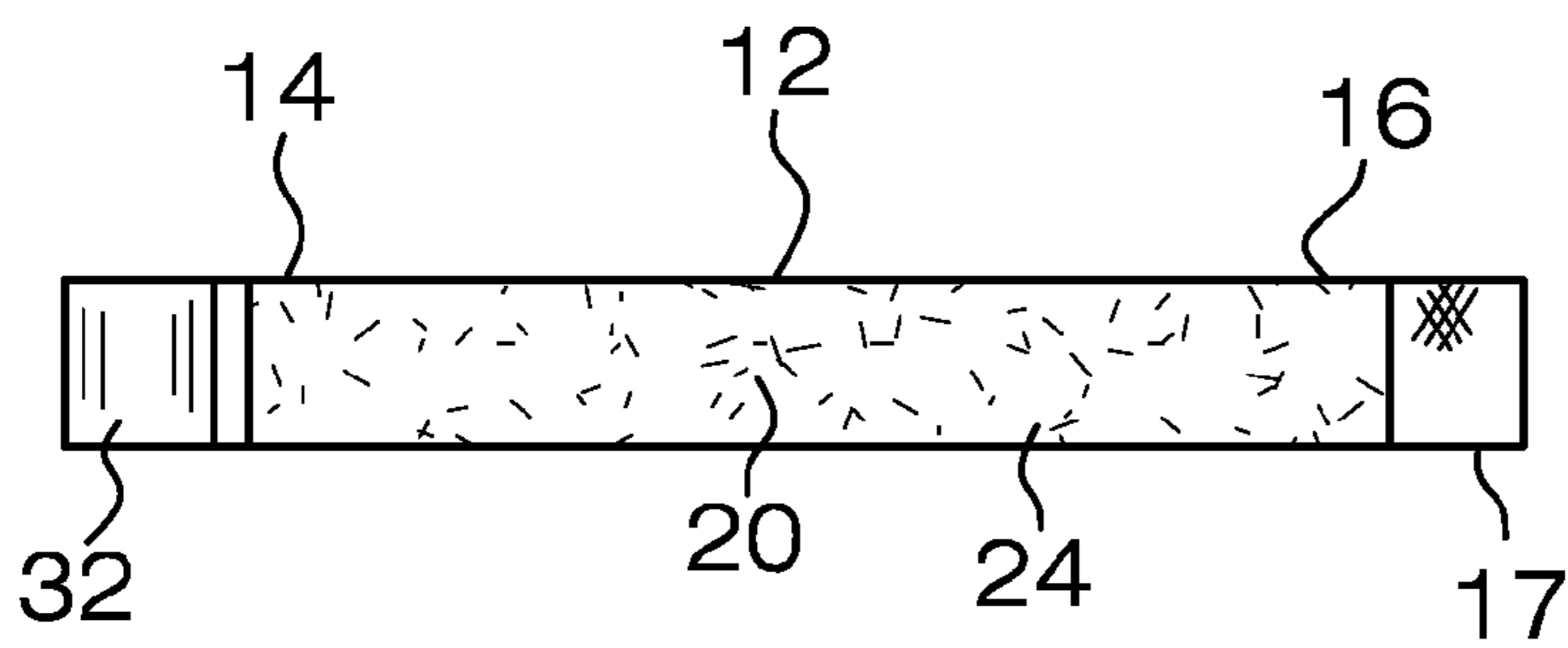
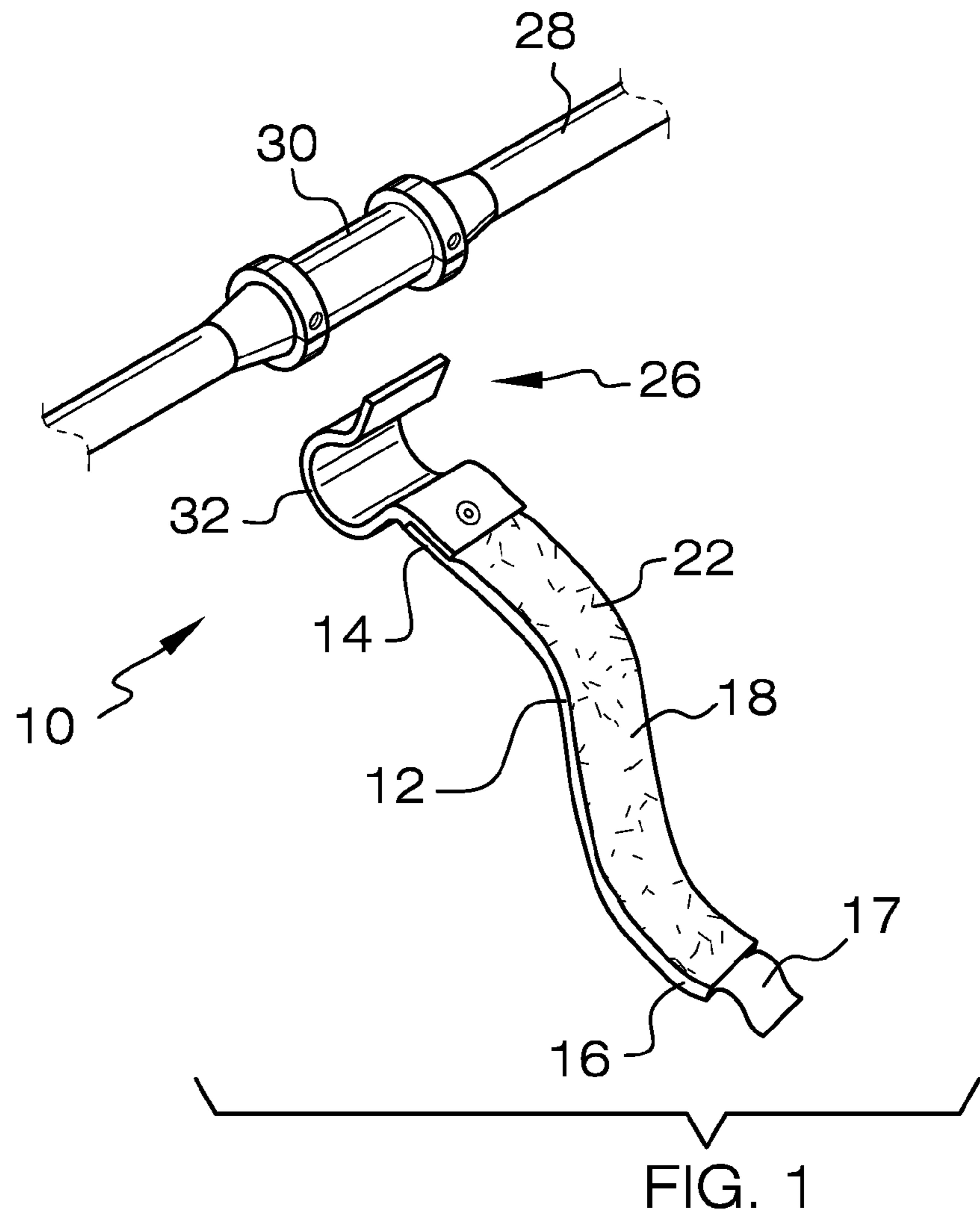


FIG. 2

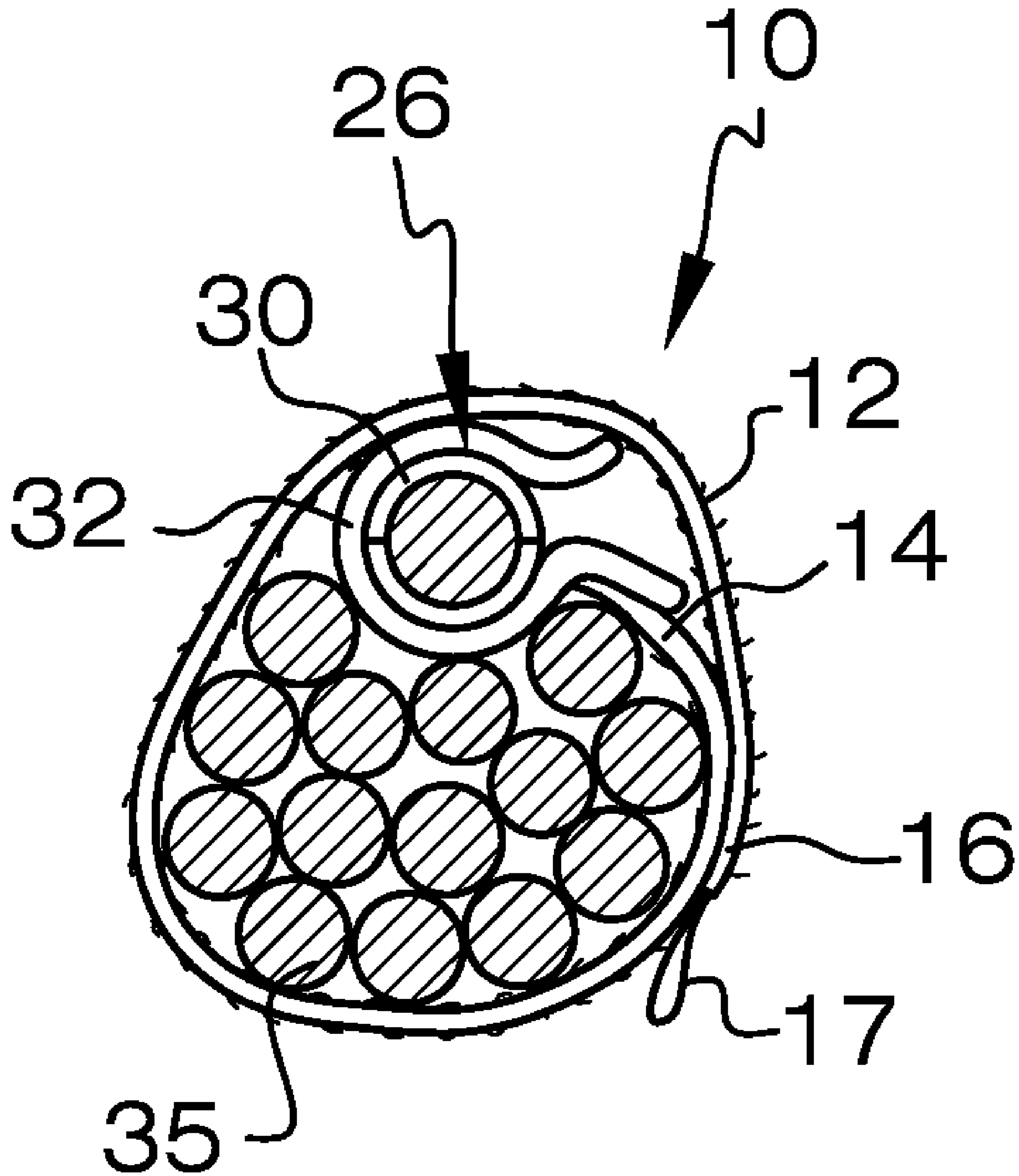


FIG. 3

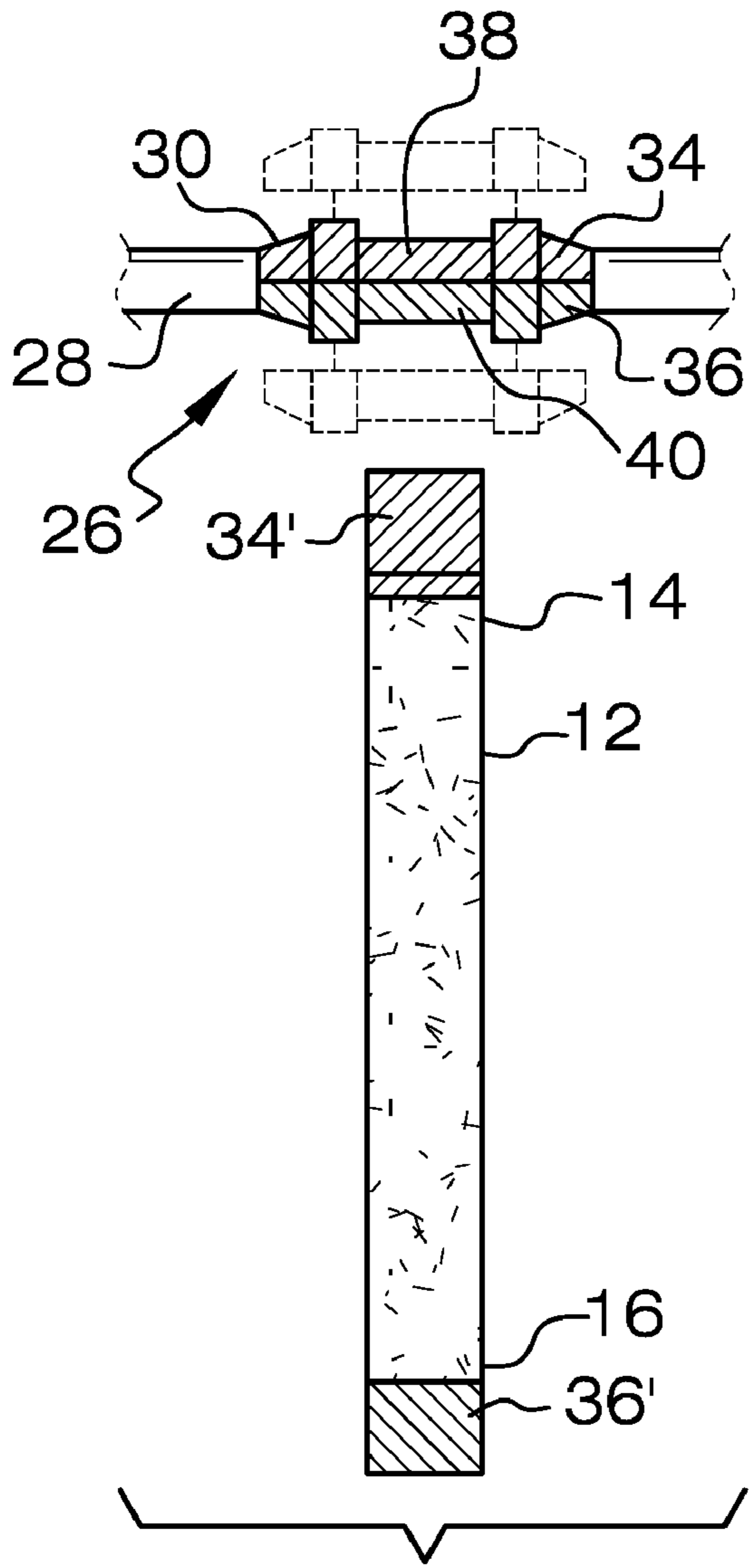


FIG. 4

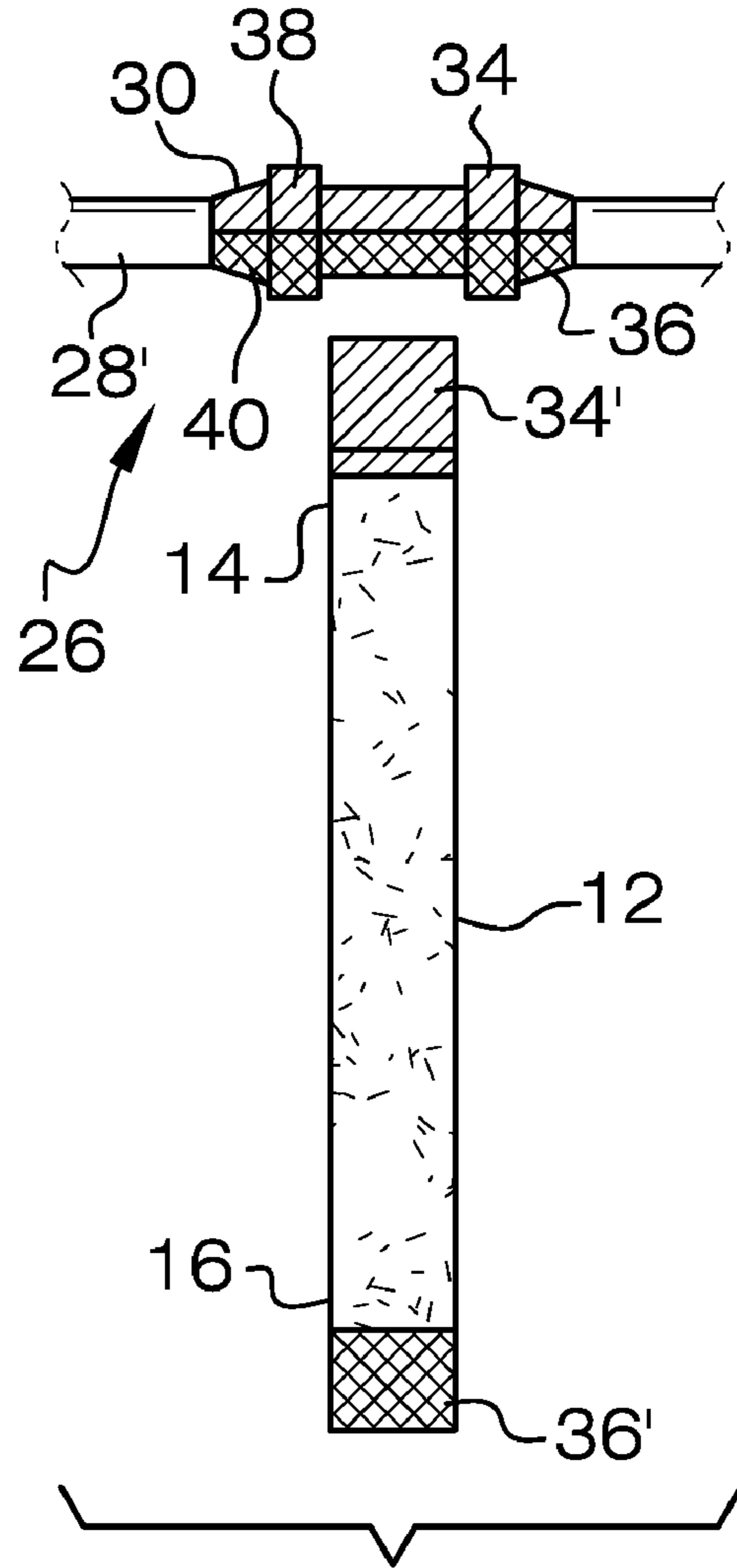


FIG. 5

**1****BUNDLING DEVICE**

## BACKGROUND OF THE INVENTION

## 1. Field of the Invention

The present invention relates to a bundling device for bundling and identifying elongated members such as cords, cables, hoses and the like.

## 2. Description of the Related Art

A wide array of devices such as straps or ties are known in the prior art for use in retaining elongated members such as various cords, wires, and cables while in use and when coiled for storage. The terms "wires", "cables", "cords", and "hoses" are considered equivalents for the purpose of the instant application, and are used interchangeably herein. The devices heretofore devised and utilized are known to consist of expected, obvious, and familiar structural configurations, notwithstanding the wide variety of designs encompassed by the crowded prior art which have been developed for the fulfillment of a myriad of objects and requirements.

Descriptions of such heretofore devices are found in U.S. Pat. No. 4,893,381 to Frankel; U.S. Pat. No. 4,963,410 to Bryant; U.S. Pat. No. 5,142,743 to Hahn; U.S. Pat. No. 5,167,050 to Korsen; and U.S. Pat. No. 5,168,603 to Reed.

While these devices fulfill their respective, particular objectives and requirements, they do have the disadvantage of being time consuming or cumbersome to use, in some cases are easily dislodged resulting in the cord becoming loose, do not provide visual indications of useful information pertaining to the cord and/or the bundling device, and are not capable of organizing a group of similar cords. Accordingly, there exists a need for an improved cord bundling device.

## SUMMARY OF THE INVENTION

The present invention overcomes the limitations and disadvantages present in the art by providing a cord bundling and organizing device which is easily used, readily removably attachable to a cord, capable of organizing large groups of similar cords and bundling devices, and provides visual indications of useful information pertaining to the cord and/or the bundling device.

Accordingly, and generally in one aspect, the present invention provides a bundling device including a flexible strap member of a preselected length having opposed first and second surfaces and opposed first and second end portions. A detachable engagement means for detachably engaging the first end portion of the flexible strap member to a portion of an elongated member. The first surface of the flexible strap member includes a plurality of hook members, and the second surface of the flexible strap member includes a plurality of loop members that are releasably engageable with the plurality of hook members to circumferentially enclose a plurality of additional elongated members. The detachable engagement means includes a first color coding as a means to facilitate the identification of the elongated members circumferentially enclosed by the bundling device. The flexible strap member is color coded and the detachable engagement means further includes a second color coding to correspond to the flexible strap color code as a means to facilitate the matching of the flexible strap member with the detachable engagement means.

In general, in another aspect, the present invention provides a bundling device including a flexible strap member of a preselected length having opposed first and second surfaces and opposed first and second end portions. A detachable engagement means for detachably engaging the first end por-

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tion of the flexible strap member to a portion of an elongated member. The detachable engagement means having a first member being affixable along a portion of an elongated member, and a second member affixed to the first end portion of the flexible strap member and being releasably engageable with the first member.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof that follows may be better understood and in order that the present contribution to the art may be better appreciated.

Numerous objects, features and advantages of the present invention will be readily apparent to those of ordinary skill in the art upon a reading of the following detailed description of presently preferred, but nonetheless illustrative, embodiments of the present invention when taken in conjunction with the accompanying drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of descriptions and should not be regarded as limiting.

As such, those skilled in the art will appreciate that the conception, upon which this disclosure is based, may readily be utilized as a basis for the designing of other structures, methods and systems for carrying out the several purposes of the present invention. It is important, therefore, that the claims be regarded as including such equivalent constructions insofar as they do not depart from the spirit and scope of the present invention.

For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there is illustrated preferred embodiments of the invention.

## BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 is a diagrammatic perspective view of the bundling device constructed in accordance with the principles of the present invention;

FIG. 2 is a top plan view of the bundling device;

FIG. 3 is a side elevation view of the bundling device in use bundling a plurality of members;

FIG. 4 is a plan view of the bundling device showing an example of a color code arrangement; and

FIG. 5 is a plan view of the bundling device showing a second example of a color code arrangement.

## DETAILED DESCRIPTION OF THE INVENTION

Referring now to FIGS. 1-5 of the drawings, reference numeral **10** generally designates the bundling device of the present invention. Referring particularly to FIGS. 1 and 2, the bundling device **10** includes a flexible strap member **12** of a preselected length. The strap member **12** has opposed first and second ends **14**, **16**, and opposed first and second surfaces **18**, **20**. The first surface **18** is provided with a plurality of hook members **22**, and the second surface **20** is provided with a plurality of loop members **24**. The second end **16** can include a pull strap **17** extending therefrom. The bundling device **10** further includes a detachable engagement means shown gen-

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erally at **26** for releasably attaching the first end **14** of the strap member **12** to a portion of an elongated member **28**, such as a cord to be bundled.

The detachable engagement means **26** includes a first member **30** that is fixedly attached to a portion of the cord **28** and a second member **32** that is separate from the first member and which is fixedly attached to the first end **14** of the strap member **12**. The first and second members **30** and **32** include cooperating structures which permit the members to be detachably engagable to each other. In an exemplary embodiment, the first member **30** includes a structure to which the second member **32** can be clipped to in a resilient manner. For example, the first member **30** can include a cylindrically body portion and the second member **32** can include a clip body adapted to at least partially encircle the body portion of the first member. It is important to note, the spirit of the detachable engagement means **26** is to provide a first element that is fixedly attachable to a portion of a cord and a second element that is fixedly attached to a portion of a strap, wherein the first and second elements are detachably engagable with each other, thereby permitting the flexible strap member **12** to be removably attached to the cord **28**.

Referring now to FIG. **3**, the bundling device **10** is shown securing a bundle of members **35** (e.g. cable, cord, hose, etc.). The flexible strap member **12**, secured at the first end **14** to a portion of the cord by the detachable engagement means **26**, is wrapped around the bundle of members **35** and secured to itself by the plurality of hook members **22** that are releasably engagable with the plurality of loop members **34** to circumferentially enclose the members. The strap member **12** may be removed from the bundled members **35** by pulling tab **17** away from the bundled members, thereby disengaging the hook members **22** from the loop members **24**. The strap member **12** may be completely removed by decoupling the first and second members **30** and **32** of the detachable engagement means **26**. The preselected length of the strap member **12** is dependent upon the overall circumference of the desired bundle.

The bundling device **10** includes a color code as a means to identify useful information about a particular cord and as a means to correctly match a strap member **12** to a cord from which it was removed. The important aspect of this feature is found in situations where numerous cords of different properties, such as gauge, length, voltage rating or purpose are utilized concurrently at a job site or work site. It is desirable to, first, be able to remove the strap member **12** from a cord when the cord is in use to prevent wearing of the strap member and to prevent the strap member from interfering with the manipulation of the cord while in use. Additionally, it is desirable to be able to learn useful information pertaining to a particular cord quickly and easily simply by looking at visual indication associated with the cord.

Referring now to FIGS. **4** and **5**, in providing the above described color coding, the first member **30** of the detachable engagement means **26** includes a first color code **34**, and the second member **32** includes a corresponding color code **34'**. Additionally, the first member **30** includes a second color code **36** of a color different from the first color code **34**. The strap member **12** includes a color code **36'** that corresponds to the second color code **36** of the first member **30**. The first color code **34** permits matching of the second member **32** with the first member **30**. The second color code **36** permits matching of the strap member **12** with first member **30**, thereby facilitating the matching of the strap member with the correct cord.

With a comparison between FIGS. **4** and **5**, a quick understanding of the color code system can be attained. For

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example, the cords **28** and **28'** of FIGS. **4** and **5** respectively have one similar property, such as gauge, and one dissimilar property, such as length, i.e. the cords **28** and **28'** have the same gauge but different lengths. With reference to the color coding of the bundling devices **10** shown in FIGS. **4** and **5** the similar and dissimilar properties are easily ascertained. The gauge of the cords **28** and **28'** is indicated by the first color code **34** which is the same in both examples, and the length of the cords are indicated by the second color code **36** which is different in both examples. Therefore, either through memorization of the color codes or using a color chart, one can easily learn the various properties the each cord.

Additionally, the color coding further ensures the correct matching between a strap member **12** and an associated cord **28**. As shown in FIG. **4**, the color code **34'** of second member **32** matches the first color code **34** on the first member **30**, and additionally, the color code **36'** of the strap member **12** matches the color code **36** on the first member. Likewise in FIG. **5**, color codes **34** and **34'** match and color codes **36** and **36'** match, thereby indicating a correct pairing between the cord **28** and the strap member **12**. To further increase visibility of color code **36'**, the pull tab **17** can include the color code.

The first member **30** of the detachable engagement means **26** can include two half body portions **38**, **40** that are detachably secured to each other to facilitate the attachment of the first member to a portion of the cord **28**. One half body member carries the first color code **34** and the second half body member carries the second color code **36**. In this manner, a plurality of half body portions having various color codes can be provided and then selected for attachment to a particular cord in accordance with the properties of the cord that are selected to be indicated. Additionally, a plurality of strap members **12** can be provided with various common color code combinations for pairing the with a particular cord.

It is important to note, while the above described example is related to an electrical cord, the identified information can include myriad of specific information pertaining not only electrical cords, but hoses, ropes and the like as well. For example, for a hose, the color coding could indicate the pressure rating of the hose, the length of the hose, the hose end fittings or a particular use of the hose. Additionally, for a rope or the like, the color coding could indicate the tensile strength of the cord, the material of the cord, or the length of the cord etc.

A number of embodiments of the present invention have been described. Nevertheless, it will be understood that various modifications may be made without departing from the spirit and scope of the invention. Accordingly, other embodiments are within the scope of the following claims.

I claim:

**1.** A bundling device comprising:

a flexible strap member of a preselected length having opposed first and second surfaces and opposed first and second end portions, said first surface of said flexible strap member includes a plurality of hook members, and said second surface of said flexible strap member includes a plurality of loop members that are releasably engagable with said plurality of hook members to circumferentially enclose a plurality of additional elongated members;

first member that is affixable along the portion of the elongated member, first member having two half body portions that are detachably secured to each other to facilitate the affixing of said first member to the portion of the elongated member, said first member further having a

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- first color code as a means to facilitate the identification of the elongated members circumferentially enclosed by said bundling device;
- a second member that is attached to said first end portion of said flexible strap member and is detachably engagable with said first member; and
- wherein said flexible strap member is color coded and wherein said first member further includes a second color code to correspond to said flexible strap color code as a means to facilitate the matching of said flexible strap member with said first member.
2. The bundling device of claim 1, wherein said first member carries said first and second color coding.
3. The bundling device of claim 2, wherein said second member is color coded to correspond with said first color coding.
4. The bundling device of claim 1, wherein one half body portion includes said first color coding, and wherein the other half body portion includes said second color coding.

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5. The bundling device of claim 1, wherein said flexible strap member is color coded at said second end portion.
6. The bundling device of claim 1, wherein said second end portion includes a pull tab integrally formed therewith.
7. The bundling device of claim 1, wherein said first color coding identifies the gauge of the elongated members circumferentially enclosed by said bundling device.
8. The bundling device of claim 1, wherein said flexible strap member is color coded as a means to indicate the pre-selected length thereof.
9. The bundling device of claim 1, wherein:  
 said first member includes a cylindrical body portion; and  
 said second member includes a clip body adapted to at least partially encircle said cylindrical body portion of said first member.

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